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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/775,929	02/10/2004	Koji Takeguchi	064731.0350	3182

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BAKER BOTTS L.L.P.
2001 ROSS AVENUE
SUITE 600
DALLAS, TX 75201-2980

EXAMINER

LEE, DAVID J

ART UNIT	PAPER NUMBER
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2613

SHORTENED STATUTORY PERIOD OF RESPONSE	NOTIFICATION DATE	DELIVERY MODE
3 MONTHS	03/13/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Notice of this Office communication was sent electronically on the above-indicated "Notification Date" and has a shortened statutory period for reply of 3 MONTHS from 03/13/2007.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

glenda.orrantia@hotmail.com
mike.furr@bakerbotts.com
ptomail1@bakerbotts.com

Office Action Summary

Application No.

10/775,929

Applicant(s)

TAKEGUCHI ET AL.

Examiner

David Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 February 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 13-22 is/are allowed.
- 6) ☒ Claim(s) 1, 2, 4-7, 23, 24, 26-30 is/are rejected.
- 7) ☒ Claim(s) 3, 8-12, 25 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 10 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 3/24/04, et al.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1, 2, 4, 6, 7, 23, 24, 26, 27, 29, and 30 are rejected under 35 U.S.C. 102(b) as being anticipated by Way (US Patent No. 6,895,184 B2).

Regarding claims 1, 23, and 27, Way teaches a method for an in-service upgrade of a twin ring optical network (see fig. 8A) comprising a plurality of passive add/drop nodes coupled using a first optical fiber ring and a second optical fiber ring (outer ring and inner ring of fig. 8A), the method comprising: interrupting optical traffic traveling in a first direction on the first optical fiber ring at a first interruption location between a first passive add/drop node and a second passive add/drop node (note fiber break 10 of fig. 8A), the add/drop nodes coupled to the optical rings and operable to passively add and drop traffic to and from the optical rings (the nodes are operable to add and drop traffic); interrupting optical traffic traveling in a second disparate direction on the second optical fiber ring at a second interruption location between the first add/drop node and the second add/drop node (note the fiber break 10 covers both the first and second ring), the first and second interruption locations proximate to one another (fiber break 10 is in a single area), the network providing protection switching such that interrupting traffic flow at the first or second interruption locations does not prevent traffic on the network from reaching any add/drop node (traffic flow is not prevented because of the protection

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scheme); and inserting an optical gateway node into the network (the nodes on either side are understood as gateway nodes), the gateway node comprising a first transport element associated with the first fiber ring and a second transport element associated with the second fiber ring, each transport element comprising: a demultiplexer operable to demultiplex ingress traffic into a plurality of constituent wavelengths (note the demultiplexer in Fig. 8A); a switch operable to selectively forward or terminate each wavelength (e.g., switch 58 of fig. 12); and a multiplexer operable to multiplex the forwarded wavelengths (note the multiplexer in fig. 8A); wherein the gateway node is inserted into the optical ring network such that the first transport element is inserted at the first interruption location and the second transport element is inserted at the second interruption location (the gateway nodes are understood as being “inserted” at the interruption location).

Regarding claims 2 and 24, Way teaches inserting a plurality of optical gateway nodes into the network to create a plurality of subnets, each subnet comprising a plurality of add/drop nodes, the number of subnets equal to the number of gateways in the network (the subnets comprise any grouping of nodes that equal the number of gateway nodes).

Regarding claims 4 and 26, Way teaches that each subnet has a wavelength channel capacity substantially equal to the optical network (this can be arbitrarily determined according to the assigning of subnets).

Regarding claims 6 and 29, Way teaches that the switch comprises a 2x2 switch for each channel, the 2x2 switch operable to selectively add, forward, or drop the channel (e.g., see col. 1, line 64).

Regarding claims 7 and 30, Way teaches that the add/drop nodes are operable to transmit substantially the same traffic over each of the first and second optical fiber rings (the nodes can transmit the same data over the rings).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 5 and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Way.

Regarding claims 5 and 28, Way teaches the limitations of claims 1, 23, and 27 but does not expressly disclose that the demultiplexer and the multiplexer comprise array waveguides. However, examiner takes Official notice that using arrayed waveguide gratings to multiplex and demultiplex signals is well known in the art. It would have been obvious to a skilled artisan at the time of invention to do so in order to provide a cheap and efficient way to provide multiplexing and demultiplexing functions.

Allowable Subject Matter

5. Claims 13-22 are allowed.

Claims 3, 8-12, 25 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to David Lee whose telephone number is (571) 272-2220. The examiner can normally be reached on Monday - Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jason Chan can be reached on (571) 272-3022. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



David Lee
Patent Examiner



JASON CHAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600